

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
8 November 2001 (08.11.2001)

PCT

(10) International Publication Number  
**WO 01/83243 A1**

(51) International Patent Classification<sup>7</sup>: **B60G 11/02**,  
11/46

(74) Agents: **FILDES, Christopher, J. et al.**; Fildes & Out-  
land, P.C., 20916 Mack Avenue, Suite 2, Grosse Pointe  
Woods, MI 48236 (US).

(21) International Application Number: PCT/US01/14771

(22) International Filing Date: 3 May 2001 (03.05.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0010611.2 4 May 2000 (04.05.2000) GB

(71) Applicant (for all designated States except US): **DE-  
TROIT STEEL PRODUCTS CO., INC.** [US/US]; 500  
North Rangeline Road, Morristown, IN 46161 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,  
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,  
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

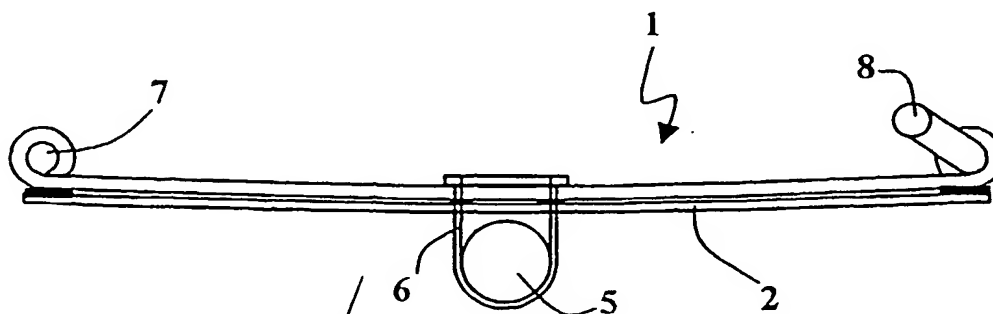
(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: VEHICLE SUSPENSION SYSTEMS



(57) Abstract: A suspension system (10) for a vehicle wheel st comprising an upper leaf spring (21) and a lower leaf spring (20) each being mounted or mountable on opposed sides of an associated vehicle generally transversely of the associated vehicle axle (15), one end of each upper and lower leaf spring (21, 20) comprising connection means (17, 18) for attachment thereof to an associated vehicle chassis, and auxiliary spring means (30) mounted in series with the upper leaf spring (21) and arranged to provide the associated vehicle with ride characteristics and dynamic deflection geometry substantially the same as those of a conventional solo leaf spring system as herein defined (Fig. 1).

WO 01/83243 A1